

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Preliminary Draft Staff Report Proposed Amended Rule 1420.1 – Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities

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Deputy Executive Officer

Planning, Rule Development, and Area Sources
Philip M. Fine, Ph.D.

Assistant Deputy Executive Officer

Planning, Rule Development, and Area Sources
Jill Whynot

Director of Strategic Initiatives

Planning, Rule Development, and Area Sources
Susan Nakamura

Authors: Mike Morris – Program Supervisor

Contributors: Tuyet-le Pham – Air Quality Specialist

Reviewed by: Megan Lorenz – Senior Deputy District Counsel

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INTRODUCTION

Rule 1420.1 – Emission Standards for Lead from Large Lead-acid Battery Recycling Facilities controls emissions of lead and other toxic air contaminants from large lead-acid battery recycling facilities. The rule applies to lead-acid battery recycling facilities that process more than 50,000 tons of lead annually, namely Exide Technologies located in Vernon, and Quemetco Inc. located in the City of Industry. The rule includes ambient lead and arsenic concentration limits, facility mass point source limits, as well as housekeeping and maintenance provisions such as regular cleaning periods, inspections and proper handling of lead containing dust and waste.

In January 2014 the SCAQMD staff reported to the Governing Board on the review of two studies that examined the technical, economic, and physical feasibility of achieving a total facility mass lead emission rate of 0.003 lb/hour from all lead point sources. Based on elevated levels of lead found in soil and surface dust at Exide by the California Department of Toxic Substances Control (DTSC), the Governing Board directed staff to begin rulemaking. In March 2015 the Governing Board adopted amendments to the rule lowering the ambient lead concentration limit and the point source lead emission rate, as well as adding other housekeeping and maintenance measures. The Governing Board also directed staff to return to the Governing Board with a rule proposal to further lower the point source lead emission rate to 0.003 lb/hr and other options. Shortly thereafter, one of the two facilities, Exide Technologies, announced that it was permanently closing.

BACKGROUND

Lead

Lead is deemed a carcinogenic toxic air contaminant (TAC) by the Office of Environmental Health Hazard Assessment (OEHHA). Chronic health effects include nervous and reproductive system disorders, neurological and respiratory damage, cognitive and behavioral changes, and hypertension. Exposure to lead can also potentially increase the risk of contracting cancer or result in other adverse health effects. Lead has been classified as a probable human carcinogen by the International Agency for Research on Cancer, based mainly on sufficient animal evidence, and as reasonably anticipated to be a human carcinogen by the U.S. National Toxicology Program. Young children are especially susceptible to the effects of environmental lead because their bodies accumulate lead more readily than do those of adults, and because they are more vulnerable to certain biological effects of lead including learning disabilities, behavioral problems, and deficits in IQ.

Under the federal Clean Air Act, lead is classified as a “criteria pollutant.” Lead has observed health effects at ambient concentrations. The U.S. EPA has thoroughly reviewed the lead exposure and health effects research, and has prepared substantial documentation in the form of a Criteria Document to support the selection of the 2008 NAAQS for lead. The Criteria Document used for the development of the 2008 NAAQS for lead states that studies and evidence strongly substantiate that blood lead levels in a range of 5-10 µg/dL, or possibly lower, could likely result in neurocognitive effects in children. The report further states that “there is no level of lead

exposure that can yet be identified with confidence, as clearly not being associated with some risk of deleterious health effects.”¹

Lead National Ambient Air Quality Standard

In October 1978, the U.S. Environmental Protection Agency (EPA) promulgated the first primary and secondary NAAQS for lead under Section 109 of the Clean Air Act. Both primary and secondary standards were set at a level of $1.5 \mu\text{g}/\text{m}^3$ averaged over a calendar quarter. Primary standards set limits to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against visibility impairment, damage to animals, crops, vegetation, and buildings.

On October 15, 2008, the EPA amended both the primary and secondary NAAQS for lead from a level of $1.5 \mu\text{g}/\text{m}^3$ to $0.15 \mu\text{g}/\text{m}^3$ averaged over a rolling 3-month period, and made changes to monitoring and reporting requirements. On December 31, 2010, the EPA designated a portion of Los Angeles County as nonattainment for the 2008 NAAQS for lead based on monitored air quality data from 2007-2009 that indicated a violation of the NAAQS near and due to a large lead-acid battery recycling facility. In May of 2014, the U.S. EPA released its “Policy Assessment for the Review of the Lead National Ambient Air Quality Standards”, reaffirming the primary (health-based) and secondary (welfare-based) staff conclusions regarding whether to retain the current standards. In January 2015 the U.S. EPA announced that the ambient lead concentration standard of $0.15 \mu\text{g}/\text{m}^3$ averaged over a rolling 3-month period would remain unchanged.

Arsenic

Arsenic is a known human carcinogen by inhalation and oral routes of exposure (NTP, 2011). Occupational exposure to inorganic arsenic compounds, especially in mining and copper smelting, has been associated with increased risk of lung cancer. Exposure to arsenic also has been associated with increased risks of cancer of the kidney, digestive tract, and lymphatic and hematopoietic systems. Exposure to arsenic in drinking water increases the risks of urinary-bladder, kidney, skin, lung, liver, and colon cancer.

Arsenic is listed under California Proposition 65 as a developmental toxicant. The oxidation state influences the toxicity, with trivalent arsenic compounds possessing greater teratogenic potential than pentavalent compounds. In studies with laboratory animals, reproductive effects observed include increased fetal death, decreased fetal weight, and congenital anomalies. Reported adverse effects of chronic inorganic arsenic exposure in children include skin lesions, neurodevelopment effects such as decreased IQ and related effects, risk of lung disease expressed in later years, and reproductive effects. Several studies have reported effects on the developing intellectual function of exposed children (OEHHA, 2008). The Office of Environmental Health Hazard Assessment (OEHHA) adopted long term and 8-hour Reference Exposure Levels for arsenic to be protective against neurological effects in children. Breathing high levels of inorganic arsenic can result in a sore throat or irritated lungs. Ingesting very high levels of arsenic can result in death. Exposure to high levels can cause nausea and vomiting,

¹ Environmental Protection Agency, Office of Research and Development, “Air Quality Criteria Document for Lead, Volumes I-II,” October 2006.

decreased production of red and white blood cells, abnormal heart rhythm, damage to blood vessels, and a sensation of "pins and needles" in hands and feet. Ingesting inorganic arsenic for a long time can cause a darkening of the skin and the appearance of small "corns" or "warts" on the palms, soles, and torso. Skin contact with inorganic arsenic may cause redness and swelling.

Closure of Exide Technologies of Vernon, CA

On April 7, 2015 Exide Technologies withdrew their California Department of Toxic Substance Control (DTSC) permit application and provided notification of its intent to permanently close. On May 15, 2015, Exide Technologies submitted a revised Closure Plan to DTSC. The Closure Plan describes the current status of the facility and contains decontamination and demolition plans. The Closure Plan also includes groundwater monitoring information, engineering controls, waste characterization, and air monitoring plans. The Closure Plan is separate than, but is occurring simultaneously with the DTSC Corrective Action imposed on Exide. The Corrective Action requires off-site cleanup of nearby residential and industrial areas as well as cleanup of on-site contaminated groundwater.

The closure is expected to occur in three phases. The first being the inventory removal, equipment decontamination and removal, decontamination and deconstruction of buildings, and soil sampling. Exide will retain a third-party environmental consultant to monitor and document implementation of dust mitigation measures and to conduct real-time air monitoring. Exide plans to continue operating emission air pollution control equipment to maintain negative pressure on associated buildings until the inventory is removed and gross cleaning of duct work is complete. Once the duct work has been removed up to the emission control equipment, the duct shall be blinded and the interior of the equipment cleaned following manufacturer's operating procedures. Decontamination of structures will be done under negative pressure by vacuum cleaning vented to HEPA filters and then pressure washing.

Phase 2 will address potential below-grade decontamination. These additional activities may require the removal of contaminated soil beneath the concrete floor at the closure areas; capping and installation of boundary markers where contaminated soils are left in place; and development of a deed notice/land use covenant. The scope of Phase 2 will be determined using data generated during Phase 1 and may be influenced by data generated during the Corrective Action. Generally areas will be excavated to a depth of five feet in and around structures. Dust control measures such as temporary enclosures and water will be used during floor removal and excavation activities. The temporary enclosure will remain in-place and/or the area will be covered until the excavation is complete.

When Phase 1 and Phase 2 are completed, the facility will submit certification by both the facility and an independent, qualified engineer registered in the State of California within 60 days of the completion of final closure, to DTSC, SCAQMD and the City of Vernon. This certification will state that the facility has been closed in accordance with the approved closure plan. Phase I of the closure is expected to commence March 2016 and be completed by May 2018. Phase II is scheduled for completion by June 2020.

Phase III (ongoing) would include post-closure and contingent post-closure work to implement long-term inspections, monitoring, and maintenance. Phase III is scheduled to last until 2049.

Rule 1420.1 Regulatory History

Large lead-acid battery recycling facilities were originally regulated under Rule 1420 - Emission Standards for Lead which was adopted in 1992 and is applicable to any facility that uses or processes lead-containing materials. In November 2010, Rule 1420.1 was adopted to establish additional requirements for large facilities that process more than 50,000 tons of lead annually to ensure compliance with the NAAQS. Rule 1420.1 included an ambient lead concentration limit of $0.150 \mu\text{g}/\text{m}^3$ and a point source limit of 0.01 lb/hr from any single source and 0.045 lb/hr from all point sources. Additionally, the rule included a series of housekeeping provisions to further control fugitive lead emissions. The Governing Board strengthened the rule by requiring facilities to submit a compliance plan identifying additional lead reductions strategies and a curtailment plan and a study assessing the economic, technical, and physical feasibility of achieving a lower point source emission limit of 0.003 lb/hour, if the ambient lead concentration exceeded $0.120 \mu\text{g}/\text{m}^3$ over a 30 day rolling average.

In March 2013, the approved AB 2588 Health Risk Assessment for Exide Technologies reported a Maximum Individual Cancer Risk (MICR) of 156 in one million, a non-cancer chronic hazard index (HI) of 63, a non-cancer acute HI of 3.8, and a cancer burden of 10. To put this in perspective, the Action Risk Level triggering risk reduction requirements in Rule 1402 – Control of Toxic Air Contaminants from Existing Sources, are 25 in one million for MICR, 3.0 for chronic or acute HI, or a cancer burden of 0.5. Arsenic, and to a lesser extent benzene, and 1,3-butadiene, emissions were the main contributors to the high cancer risk. As a result, on January 10, 2014, Rule 1420.1 was amended to include an arsenic ambient concentration limit of $10.0 \text{ ng}/\text{m}^3$ averaged over a 24-hour period and point source emission limits for arsenic, benzene, and 1,3-butadiene. Curtailment provisions for lead and arsenic and requirements for installation and operation of differential pressure monitors were also included in the amendments.

In March 2014, Rule 1420.1 was amended to include requirements for the large lead-acid battery recycling facilities to participate in a multi-metals continuous emissions monitoring program with the SCAQMD.

The rule was recently amended in March 2015, to further lower the ambient lead concentration limit to $0.120 \mu\text{g}/\text{m}^3$ effective January 1, 2016 and $0.100 \mu\text{g}/\text{m}^3$ effective January 1, 2017 and the point source lead emission rate to 0.023 lb/hr, as well as adding additional housekeeping and maintenance requirements. The Governing Board also directed staff to return to the Governing Board with a rule proposal to lower the point source lead emission rate to 0.003 lb/hr and other options.

PROPOSED AMENDED RULE 1420.1

Proposed Amended Rule (PAR) 1420.1 would include revisions to the lead point source emission rate and additional provisions for facility closures.

Applicability

The proposed rule will expand applicability to cover former lead-acid battery recycling facilities during closure activities. PAR1420.1 will apply until the proposed closure requirements in paragraph (p)(8) are satisfied. The expanded applicability is necessary to ensure that attainment

with the lead NAAQS will be maintained and that surrounding communities suffer no degradation in air quality during closure, including demolition, cleanup and decontamination activities.

Multi-metal Continuous Emissions Monitoring System (CEMS)

Staff is considering requiring use of in-stack multi-metal Continuous Emissions Monitoring Systems as an additional informational tool for operators to use to monitor emissions.

Lead Point Source Emission Rate

PAR 1420.1 will lower the lead point source emission limit. Staff is proposing to reduce the total facility mass lead emissions from all lead point sources under subparagraph (f)(1)(A) from 0.045 lb/hour to 0.003 lb/hour, effective on the date of adoption. As seen in Table 1 below, the point source emission rates at Quemetco were all below the proposed emission limit. The lead emission rates have been achieved in practice based on more than six years of testing and six years of operation at Quemetco.

Table 1 – Quemetco Lead Point Source Test Rates
(Test Method 436, three run average)

Test Date	Lead Emission Rate (lb/hr)	Lead Emission Rate (lb/year)
Nov 2008	0.001	9.5
Nov 2009	0.0002	1.4
Nov 2010	0.0005	4.0
Sep 2012	0.0003	2.2
Nov 2013^a	0.0005	4.2
Nov 2013^b	0.0005	4.6
Feb 2014	0.0003	3.0
Proposed	0.003	8.8

a Quetmeco co-testing

b SCAQMD co-testing

Source Testing

PAR 1420.1 will eliminate the biennial source test option for facilities that demonstrate a lead point source emission rate of 0.0012 lb/hr or less. The proposed rule will require annual source testing for point sources that emit lead and arsenic point sources, and all benzene and 1,3-butadiene point sources, excluding emission control devices on total enclosures.

Curtailment Provisions

Staff is proposing to reduce the lead point source emission rate and arsenic ambient concentration limit effective upon adoption. Under the current provisions of Rule 1420.1, sources are required to curtail their process if they exceed either ambient limits or total facility mass emission rates. The rate of curtailment is dependent on the level of exceedance with the first tier coinciding with the respective limits as found in Tables 1 and 2 of Rule 1420.1. Thus, effective upon adoption, the first tier of the monitored ambient air concentration rate for

mandatory daily process curtailments in Table 1 of subparagraph (p)(1) and the first tier of the total facility mass emission rate for process curtailments in Table 2 of subparagraph (p)(2) will be reduced to coincide with the proposed limits.

Facility Closure

The proposed amendments include provisions for lead-acid battery recycling facility owner and operators to ensure no degradation to air quality occurs during facility closure activities such as demolition, decontamination, and cleanup. Facility closure entails permanently stopping production and notifying the Executive Officer in writing that the facility will no longer be in operation.

In the proposal, facilities that are going through the closure process of decontamination and demolition will be required to continue abiding by housekeeping (subdivision (h)) and maintenance (subdivision (i)) provisions in the rule and conducting daily lead and arsenic ambient monitoring (paragraphs (d)(1), (d)(3), (d)(5) and (d)(6)). Total enclosures will be required to continue operating under negative pressure and vented to permitted air pollution control equipment until the structure itself is being demolished. Provisions are included for temporary relocation of the monitors to facilitate demolition. A trust fund in the amount of \$1,084,050, accessible by the SCAQMD, will be required to be established by the closing facility to pay for five years of ambient monitoring. Five years is the estimated time that the facility would be conducting closure activities and 12 months of subsequent ambient monitoring. The amount in the trust fund was calculated by multiplying the cost of testing for ambient arsenic and lead (\$99) by six monitors operating 365 days per year for five years. The trust fund will only be accessed if the closing facility is unable to continue paying for ambient monitoring during closure.

All demolition, cleanup and decontamination activities shall cease, and submittal of a Compliance Plan for Closure Activities will be required if the lead or arsenic ambient concentrations exceed rule requirements. Closure activities will not resume until the Executive Officer approves the Compliance Plan for Closure Activities. The plan should include a description of additional lead and/or arsenic control strategies that will address the ambient exceedances. It is not intended to be as comprehensive as Compliance Plans pursuant to subdivision (g).

Facilities will be required to continue monitoring, housekeeping and maintenance activities until the lead-acid battery recycling facility has submitted certification of final closure to SCAQMD, and there are no exceedances of ambient lead or arsenic concentrations for 12 consecutive months, with at least one month on or after the date of submittal of certification of final closure. When the Executive Officer has found that closure conditions have been satisfied, rule applicability will cease and the trust fund required in paragraph (p)(8) may be dissolved.

Exemption

An exemption has been included to specify which provisions of the rule do not apply to a facility that has permanently ceased production notified the Executive Officer in writing that the facility is permanently closing. If the facility has ceased production, point source emission rate limits,

operational Compliance Plans, source testing and curtailment requirements are no longer necessary.

SOCIOECONOMIC ASSESSMENT

A socioeconomic assessment for PAR 1420.1 will be conducted and will be available to the public at least 30 days prior to the SCAQMD Governing Board Meeting anticipated for September 4, 2015.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

Pursuant to the California Environmental Quality Act (CEQA) and SCAQMD Rule 110, SCAQMD staff will evaluate the proposed project and make the appropriate CEQA determination. The public workshop meeting will also provide an opportunity to solicit public input on any potential environmental impacts from the proposed project. Comments received at the public workshop on any environmental impacts will be considered when making the CEQA determination.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE SECTION 40727

Requirements to Make Findings

California Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PAR 1420.1 is needed to further protect public health by reducing lead emissions from large lead-acid battery recycling facilities. For a toxic air contaminant such as lead, for which there is no level of exposure that can yet be identified with confidence as clearly not being associated with some risk of deleterious health effects, the intent of this proposed rule is to further reduce lead emissions to the extent feasible.

Authority

The SCAQMD Governing Board has authority to adopt PAR 1420.1 pursuant to the California Health and Safety Code Sections 39002, 39650 et. seq., 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, 41700 and 41706.

Clarity

PAR 1420.1 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

PAR 1420.1 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions or state or federal regulations. The proposed amended rule requirements are in

addition to, and consistent with DTSC's authority to regulate hazardous waste and enforce closure plans.

Non-Duplication

PAR 1420.1 will not impose the same requirements as any existing state or federal regulations. The proposed amended rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

Reference

By adopting PAR 1420.1, the SCAQMD Governing Board will be implementing, interpreting or making specific the provisions of the California Health and Safety Code Sections 40001 (rules to achieve and maintain ambient air quality standards), 41700 (nuisance), 41706(b) (emission standards for lead compounds from non-vehicular sources), Federal Clean Air Act Section 112 (Hazardous Air Pollutants), and CAA Section 116.

COMPARATIVE ANALYSIS

Health and Safety Code section 40727.2 requires a comparative analysis of the proposed amended rule with any Federal or District rules and regulations applicable to the same source. See Table 3 below.

Table 3: Comparison of PAR 1420.1 with SCAQMD Rule 1420.1, SCAQMD Rule 1420, the 2008 Lead NAAQS, and the NESHAP for Secondary Lead Smelters

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
Applicability	Rule will apply to owners or operators during closure activities	Lead-acid battery recycling facilities that have ever processed more than 50,000 lead-tons/year	Facilities that use or process lead-containing materials	Facilities that melt non-ferrous metals including lead	All States	Secondary lead smelters
Lead Ambient Air Quality Standard	No proposed changes	January 1, 2016, to December 31, 2016 meet 0.110 $\mu\text{g}/\text{m}^3$ averaged over 30 consecutive days. On and after January 1, 2017 meet 0.100 $\mu\text{g}/\text{m}^3$ averaged over 30 consecutive days.	1.5 $\mu\text{g}/\text{m}^3$ averaged over 30 days	None	0.15 $\mu\text{g}/\text{m}^3$: 3-month rolling average Demonstrated over a 3-year period.	None
Arsenic Ambient Air Quality Standard	No proposed changes	10.0 ng/m^3	None	None	None	None
Total Enclosures	No proposed changes	Total enclosures for main areas where processing, handling and storage of lead-containing materials occur	None	Enclosed storage area for dust-forming material including, but not limited to, dross, ash, or feed material	None	Total or partial enclosures for: - Smelting furnace and dryer charging hoppers, chutes, and skip hoists; - Smelting furnace lead taps, and molds

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
						during tapping; - Refining kettles; - Dryer transition pieces; and Agglomerating furnace product taps
Emission Standard and Requirements for Lead Control Devices	Total facility mass emission rate of 0.003 lb/hr of lead from all lead point sources; Maximum emission rate, use of filters and secondary lead controls on dryer remain unchanged.	Total facility mass emission rate of 0.023 lb/hr of lead from all lead point sources; maximum emission rate of 0.010 lb/hr of lead for any individual lead point source Use of filters or bags that are rated by the manufacturer to achieve 99.97 percent control efficiency on 0.3 micron particles or made of PTFE membrane material Secondary lead controls on dryer	99% control efficiency for particulate matter; 98% control efficiency for lead	99% control efficiency	None	Concentration of 2.0 mg/dscm
Compliance Plan	Additional Compliance Plan for Closure Activities required if ambient concentrations of lead or arsenic exceed rule limits	Only required if a facility exceeds ambient lead concentration limit of 0.110 $\mu\text{g}/\text{m}^3$ from	Specifies general facility information	None	None	None

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
	during facility closure activities	January 1, 2016 to December 31, 2016 or 0.100 $\mu\text{g}/\text{m}^3$ on or after January 1, 2017 Identifies additional lead control measures beyond the rule.				
Ambient Air Monitoring Requirements	- Monitoring required during facility closure activities	Daily sampling for lead and arsenic Provisions included for monitor failure One year sample retention Minimum of four monitors at facility locations approved by the Executive Officer Samples collected at least once every three days Results reported monthly Daily sampling if 0.120 $\mu\text{g}/\text{m}^3$ is exceeded after January 1, 2015	Minimum of two monitors at facility locations approved by the Executive Officer Samples collected every six days Results reported quarterly	None	For states, a minimum of: - One source-oriented monitor at all facilities emitting 1.0 tons of lead/year; and - One non-source-oriented monitor in urban areas with a population of at least 500,000 people - Samples collected every six days	None

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998-12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
Housekeeping and Maintenance Requirements	- Housekeeping and Maintenance required during facility closure activities	Prescribed requirements for cleaning frequencies of specific areas; maintenance activity; building integrity inspections; storage and transport of lead-containing materials; onsite mobile sweeping; and surface impoundment cleanings	Requirements for storage of dust-forming material; weekly cleaning of surfaces subject to vehicular or foot traffic; and storage, disposal, recovery, and recycling of lead or lead-containing wastes generated from housekeeping activities	Surfaces subject to vehicular or foot traffic shall be vacuumed, wet mopped or otherwise maintained	None	Periodic wash down of plant roadways (lower frequency than PAR 1420.1); wet suppression of battery breaking area storage piles; vehicle wet washing of vehicles exiting the materials handling and storage areas
Reporting Requirements	- No proposed changes	- Reporting to Executive Officer within 72 hours of daily ambient air lead concentration of $0.300 \mu\text{g}/\text{m}^3$ with the following information: <ul style="list-style-type: none"> o Date of the occurrence; o Name of the monitor; o Ambient lead concentration at the monitor for the 24 hour sample; o Potential cause 	Ambient air lead and wind monitoring for any lead-processing facility that is required or elects to do ambient air monitoring	- Source test results Amount of metal processed if requesting exemption	For states: <ul style="list-style-type: none"> - State Implementation Plan submittal; - Periodic emissions reports from stationary source monitors; - Ambient air quality data and associated assurance data 	- Lead control alarm/failure reports including fugitive dust control measures performed during failures

Rule Element	PAR 1420.1	SCAQMD Rule 1420.1	SCAQMD Rule 1420	CARB 1998- 12-30 Non Ferrous Metal Melting ATCM	2008 Lead NAAQS	NESHAP from Secondary Lead Smelting
		<ul style="list-style-type: none"> or causes of the occurrence; and ○ Potential remedies to prevent the reoccurrence. ○ Caution signs posted at entrances and perimeter Notification of breach of total enclosure				
Facility Closure	<ul style="list-style-type: none"> - Continue ambient monitoring of lead and arsenic, housekeeping and maintenance requirements - Maintain total enclosure provisions until structure is demolished - Establish a trust fund to pay for ambient monitoring if facility unable to pay - Establish end of rule applicability 	- None	- None	- None	- None	- None

REFERENCES

REFERENCES

“DTSC Review of Step-out Dust and Soil Sampling Report and Order to Perform Emergency Response Interim Measures to Clean Up Off-site Contaminated Soil, Dust, and Sediment, Exide Technologies, Vernon, CA (Corrective Action Consent Order, Docket Number P3-01/02-100)” P3-01 /02-010”, Department of Toxics Substances Control, https://www.dtsc.ca.gov/HazardousWaste/Projects/upload/Exide_Technologies_Letter_Emergency_Response_Interim_Measure.pdf, accessed January 12, 2015.

“Air Quality Criteria Document for Lead, Volumes I-II,” Environmental Protection Agency, Office of Research and Development, October 2006.

“Lead in Air,” Environmental Protection Agency, (<http://www.epa.gov/air/lead.html>), June 12, 2009.

“National Ambient Air Quality Standards for Lead; Final Rule,” 40 CFR Parts 50, 51, 53, and 58, Environmental Protection Agency, November 2008.

“Prioritization of Toxic Air Contaminants Under the Children’s Health Act,” Environmental Protection Agency, Office of Environmental Health Hazard Assessment, October 2001.

“Staff Report for Proposed Rule 1420.1: Emission Standards for Lead from Large Lead-Acid Battery Recycling Facilities,” South Coast Air Quality Management District, February 2015.

“Staff Report for Proposed Amended Rule 1420.1: Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities,” South Coast Air Quality Management District, January 2014.

U.S. EPA’s “Policy Assessment for the Review of the Lead National Ambient Air Quality Standards,” Environmental Protection Agency, May 2014